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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/997,532	11/29/2001	SHAWN R. GETTEMY	PALM-3698	5478

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WAGNER, MURABITO & HAO LLP
Third Floor
Two North Market Street
San Jose, CA 95113

EXAMINER

RAO, SHRINIVAS H

ART UNIT	PAPER NUMBER
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2814

DATE MAILED: 05/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

8m

Office Action Summary	Application No. 09/997,532	Applicant(s) GETTEMY, SHAWN R.	
	Examiner Steven H. Rao	Art Unit 2814	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 March 2005.
 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) ☐ Claim(s) _____ is/are allowed.
 6) ☐ Claim(s) 1-32 is/are rejected.
 7) ☐ Claim(s) _____ is/are objected to.
 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Amendment

Applicants' amendment filed on February 14, 2005 has been entered and forwarded to the examiner March 09, 2005.

Therefore claims 1-2, 6,10-13,17,21-23, 28,and 32 as amended by the amendment of June 18, 2005 and claims 3-5,7-9,14-16,18-20,24-27,29-31 as originally filed are currently pending in the Application.

Claim Rejections - 35 USC Section 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action'.

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3,5-14 and 16-25 and 27-32 are rejected under 35 U.S.C. 103(a) as being obvious over Mamiya et al. (U.S. Patent No. 5,764,322, herein after Mamiya) in view of Kubo et al. (U.S. Patent No. 6,456,279 herein after Kubo) .

With respect to claims 1 and 12 Mamiya describe, etc., col. 8 lines 20-25) a reflective display disposed above said backlight device', (Mamiya fig. 14 # 108) . Mamiya does not specifically describe an embedded light guide extending through said

Art Unit: 2814

reflective display which conducts light from said backlight device to an area above said reflective display.

However Kubo in figure 4 and col. 8 lines 65 to col. 9 line 20 describes an embedded light guide extending through said reflective display which conducts light from said backlight device to an area above said reflective display so that an image of good visibility which has high luminance and is uniform over its entire reflective display area can be obtained even in an environment in which the external light is insufficient.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to include Kubo's embedded light guide extending through said reflective display which conducts light from said backlight device to an area above said reflective display in Mamiya's device so that an image of good visibility which has high luminance and is uniform over its entire reflective display area can be obtained even in an environment in which the external light is insufficient. (Kubo col. 6 lines 5-10).

The remaining limitation of claim 1 :

wherein the light is reflected on to said reflective display (Kubo figure 4).

With respect to claims 2 and 13 describe the display assembly of Claim 1, further comprising a front light reflecting film disposed above a top surface of said reflective display and operable to reflect light onto said top surface and being sufficiently transparent to allow viewing of said reflective display. (figure 14, 1 16).

With respect to claims 3 and 14 describe the display assembly of Claim 1,

wherein said backlight device is an electro-luminescent (EL) light device. (col. 10 lines 45-46).

With respect to claims 5 and 14 describe the display assembly of Claim 1, wherein said backlight device is a cold cathode fluorescent tube (CCFT) light device. (col. 10 lines 45-46).

With respect to claims 6 and 17 describe the display assembly of Claim 1, further comprising a brightness enhancing film (BEF) disposed between said backlight device and said bottom surface of said reflective display and for directing light toward said light guide. (Col. 9 lines 10-39).

With respect to claims 7, 8, 29, 18, 19, 30 and 31 describes the display assembly of Claim 1, wherein said reflective display is an electronic ink display and an electronic paper display.

The limitations the reflective display is used as a electronic ink display and electronic paper display, these limitations recite the manner in which the claimed apparatus is intended to be employed.

It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Ex parte Masham, 2 USPQ 2d 1647 (1987).

With respect to claim 10 describes the display assembly of Claim 1, wherein said light guide comprises a plurality of said light guides which enclose an area of said reflective display. (col. 7 lines 21-25).

With respect to claim 11 describes the display assembly of Claim 10, wherein said plurality of said light guides enclose a sub-pixel of said reflective display. (Mamiya Figure 14, col. 7 lines 35-40, col. 10 line 35).

With respect to claim 21 describes the display assembly of Claim 1 , wherein said light guide comprises a plurality of said light guides which enclose an area of said reflective display. (Mamiya col.1 lines 50-55)

With respect to claim 22 describes the display assembly Claim 12, wherein said plurality of said light guides enclose a sub-pixel of said reflective display. (Mamiya Figure 14, col. 7 lines 35-40).

With respect to claim 23 Mamiya describes a display assembly for an electronic device comprising : a backlight device', a reflective display disposed above said backlight device', and a plurality of light guides embedded within said reflective display and enclosing a display area within said reflective display, wherein said light guides conduct light from said backlight device to an area above said reflective display. (rejected for reasons stated under claims 1,1 1 etc.).

With respect to claim 24 Mamiya describes the display assembly of Claim 23, further comprising a front light reflecting film disposed above said reflective display and operable to reflect said light back onto said reflective display and being sufficiently transparent to allow viewing of said reflective display. (rejected for same reasons as those stated under claim 2 above).

With respect to claim 25 Mamiya describes the display assembly of Claim 23, wherein said backlight device is an electro-luminescent (EL) light device. (HIRAKATA col.3 lines 1 7-20 , etc).

With respect to claim 27 Mamiya describes the display assembly of Claim 23, wherein said backlight device is a cold cathode fluorescent tube (CCFT) light device. (col. 10 lines 45-46).

With respect to claim 28 describes the display assembly of Claim 23, further comprising a brightness enhancing film (BEF) disposed above said backlight device and below said reflective display for directing light toward said plurality of light guides. (Col. 9 lines 10-39).

With respect to claim 32 describes the display assembly of Claim 23, wherein said plurality of light guides enclose a sub-pixel area of said reflective display. (Mamiya Figure 14, col. 7 lines 35-40).

B. Claims 4, 15 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mamiya et al (U.S. Patent No. 5,764,322, herein after Mamiya) in view of Kubo (U.S. Patent No. 6,456,279, herein after Kubo) as applied to claims 1-3, etc. above and further in view of HIRAKATA et al. (U.S. Patent No. 6,191 , 833 herein after HIRAKATA) .

With respect to claim 4 Mamiya describes the display assembly of Claim 1. Mamiya does not specifically describe the backlight device contains at least one light emitting diode (LED).

However, Hirakata in col. 3 lines 17 to 20 describes the back light can be a Led or fluorescent tube to save valuable real estate, provide a light source with longer life and also a device that does not generate as much heat thereby eliminating the need for heat removing devices like heat sink etc.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to substitute Hirakata's Led for Mamiya's fluorescent tube in Mamiya's device to save valuable real estate, provide a light source with longer life and also a device that does not generate as much heat thereby eliminating the need for heat removing devices like heat sink etc.

With respect to claim 15 describes the display assembly of Claim 12, wherein said backlight device contains at least one light emitting diode (LED). (Hirakata col.3 lines 17-20 , etc).

With respect to claim 26. The display assembly of Claim 23, wherein said backlight device contains at least one light emitting diode (LED).

Response to Arguments

Applicant's arguments (that are repeated and also stated in the previous response) filed on June 03, 2004 and June 18, 2004 have been fully considered but they are not persuasive for reasons set out previously and incorporated here by reference for the sake of brevity. (only examples of response to Applicants' arguments are listed below for ready reference)

Art Unit: 2814

Applicants' arguments regarding claims 1,12 and 23 see Applicants' first contention the teachings of Mamiya should be limited to a " conventional transmissive type liquid crystal display unit " is not persuasive because :

(a) Applicants' description of that a back light or illuminated LCD can only be a Transmissive LCD is at odds with Applicants' specification at least at pages 1 ,5 and 6 lines 6-9 state:

Applicants' specification page 1 "electronic devices that contain display devices. More particularly, embodiments of the present invention relate to reflective displays which use light guides to conduct light through the display from a backlight device." (emphasis supplied) Page 5 lines 1 1-15 "electronic devices that contain display devices. More particularly. Embodiments of the present invention relate to reflective displays which use light guides to conduct light through the display from a backlight device." (emphasis supplied).

Page 6 lines 1-4

"Embodiments of the present invention are directed to a reflective display assembly for an electronic device which is disposed above a backlight device.

A light guide within the reflective display conducts light from the backlight device, through the reflective display, to the top layer of the reflective display."(emphasis supplied) .

Therefore Mamiya's teachings should not be limited to transmissive type LCD but to both transmissive and reflective LCDS similar to Applicants' devices.

(b) Further it is well known in the art (e.g. U.S. Patent Nos. 6,700,557, Mcknight and 6,697,135 Baek, et) to use transmissive and reflective LCDS interchangeably or even use hybrid of both i.e. transreflective LCDS.

Applicants' second contention that Mamiya teaches away from the presently recited claims because Mamiya relies upon directing light up through the display device whereas a typical reflective display is sufficiently opaque as to prevent the transmission of light through the display itself " is again completely at odds with the description in Applicants' specification. Page 6 lines 1-4

"Embodiments of the present invention are directed to a reflective display assembly for an electronic device which is disposed above a backlight device. A light guide within the reflective display conducts light from the backlight device, through the reflective display, to the top layer of the reflective display." (emphasis supplied) .

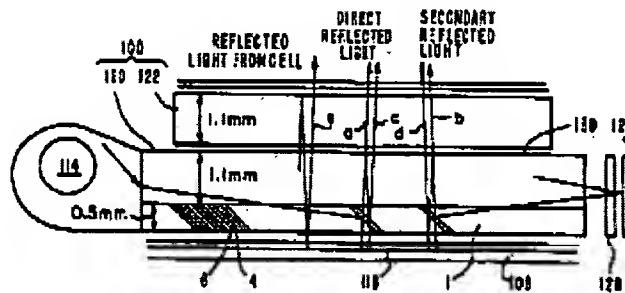
Therefore either the above argument in the response is wrong because the allegedly reflective LCD recited in Applicants' claims also has light conducted from the backlight device, through the reflective display, to the top layer of the reflective display for all of Applicants' embodiments OR Applicants' device AS PRESENTLY DESCRIBED IN Their SPECIFICATION is inoperable or if it operates in a different way than the Applicants' have not disclosed their best mode in the present specification.

Applicants' next contention that Mamiya does not teach the recited light guide within the reflective display is not persuasive because fig. 14 reproduced below shows layer (which was equated to the reflective layer 104 and the reflective display as layer

Art Unit: 2814

108 in the outstanding rejection page 2 last 5-3 lines and not layer 116 has been alleged in the response) and in col. 6 lines 56 to 59 states :

the present invention. The back light shown in FIG. 5 is a back light where instead of the dotted pattern shown in FIG. 14 the light guiding sheet 1 of this embodiment has been attached to the back surface of the light guiding body 104 of FIG. 14 where the section is a wedge shape. And, a line-shaped light source 114 for example, a cold cathode tube is



Applicants' contention that in their invention, " reflective display is illuminated by the light reflected from above by the reflective layer " and this function/method is not allegedly described by the applied Mamiya reference is not persuasive for the following reasons.

Claim 1 and all claims under consideration do not recite this functional limitation and unless and until " reflective display is illuminated by the light reflected from above by the reflective layer" only this distinguishing factor cannot be given patentable weight.

Further Claim 1 and all claims are device claims wherein the function/method of individual parts cannot be given patentable weight.

Therefore all of Applicants' arguments are found to be not persuasive and therefore independent claim 1 and dependent claims 2-3, 5-11, 13-14, 16-22, 24-25 and 27-32 are also not allowable.

With respect to applicants' arguments regarding claims 2 and 13, Applicants' one skilled in the art as being comparable or interchangeable with a reflecting film, is not persuasive because the same layer 116 in figure 8 of Mimiya shows :

contend that polarizing plate layer 116 of figure 14 cannot be reasonably interpreted by it is clear from the above that layer 116 at least several light elements marked a to e. (i.e . the polarizing plate layer) reflects

Applicants' next contention that Mimiya does not show " a front light reflecting film disposed above said top surface of said reflective display " is not persuasive because element 116 identified as (front light reflecting film and shown in the figure 8, etc.) is disposed above the top surface of the reflective display 102 in figure 14 which includes layer 104 (compared to the said reflective display) and its (104) top surface .

Applicants' next contention that Mimiya does not describe either an electro-luminescent light device or a cold cathode fluorescent tube within , or embedded within, a reflective display as recited in independent Claims 1 and 12 of the present invention.

Therefore, the Applicants respectfully submit that Claims 3 and 5, which depend from Claim 1, are not anticipated by Mamiya. The Applicants respectfully submit that Claim 14, which depends from Claim 12, is also not anticipated by Mamiya. "

Applicants' arguments are not commensurate with the presently recited claim 1 which does recite " embedded light guide" and claim 12 recites "comprising an embedded light guide " but does not recite embedded within the reflective display as argued, and giving the broadest interpretation to Applicants' claims " embedded means embedded within the claimed display assembly and not within the reflective display ,

Art Unit: 2814

and the claims do not specify the backlight (further recited as a electro-luminescent light in claim 3 and cold cathode fluorescent tube in claim 5) as being within , or embedded within, a reflective display . Structures not recited in the claims cannot be given patentable weight.

Assuming Arguendo Applicants' recite the argued unrecited element the same is shown in Muirya at least figure 14 wherein layer 104 is within display the top surface of layer 104. Further Kubo figures 11, 12 show the claimed

With respect to claims 6 and 17 it is noted that all of the present claims are device claims and the process limitation " directing light toward said light guide cannot be given patentable weight in the present form. As shown above the present claims do not contain the limitation of the light guide within or embedded within a reflective display.

Claims 7,8,18,19,29,30 and 31 were alleged to be allowable because of their dependency upon claim 1. However as shown above claim 1 is not allowable. Therefore claims 7,8,18,19,29,30 and 31 are also not allowable.

The embedded light guide

argument is not persuasive for reasons stated above.

With respect to claims 29, 30 and 31 Applicants' state, "Claims 29, 30, and 31 depend from Claim 23 which recites: a reflective display disposed above said backlight device', and a plurality of light guides embedded within said reflective display and enclosing a display area within said reflective display, wherein said light guides conduct light from said backlight device to an area above said reflective display.

Art Unit: 2814

The Applicants respectfully submit that Mamiya does not satisfy the claimed structural limitations of Claim 23. " However Applicants' have made no such argument with respect to independent claim 23 which actually contains the language , "a reflective display disposed above said backlight device', and a plurality of light guides embedded within said reflective display" .

However as stated in the rejection Mimiya at least in col. 1 lines 50-60 describes this element and each prism within the reflective display is a plurality of light guides embedded in the reflective display.

Applicants' contention with respect to claim 11 is not persuasive because Applicants' have not understood that each pixel for each color red, green blue has to have sub-pixels.

With respect to claim 21 Applicants' have not understood that each prism sheet has prisms each of which are light reflective guide further plural light guides within reflective display is taught for reasons stated under claim 1 above. With respect to claims 22 arguments not persuasive for reasons stated under all the claims above.

With respect to claim 23 (see response under claim 11, etc. above) , claim 24 (fig. 14 # 1 16 above reflective display 104), claim 25 (see response under claims 2, 3,5 ,

etc.) claim 27 (see response under claims 23. 1 1, 10, etc.) , claim 28 (see response

Art Unit: 2814

under claims 2, 24 , etc.) , claim 32 (see response under claims 10,1 1, etc.),
claims 4,

15 and 26 were alleged to be allowable for same reasons as claim 1 and 12
respectively.

However as shown above claims 1 and 12 are not allowable , therefore claims
4,1 5 and 26 are also not allowable.

Therefore all claims are not allowable.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time
policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE
MONTHS from the mailing date of this action. In the event a first reply is filed
within TWO MONTHS of the mailing date of this final action and the advisory action is
not mailed until after the end of the THREE-MONTH shortened statutory period, then
the shortened statutory period will expire on the date the advisory action is mailed, and
any extension fee pursuant to 37 CFR 1 .136(a) will be calculated from the mailing the
advisory action. 'In no event, however, will the statutory period for reply expire later than
SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communication from the
examiner should be directed to Steven H. Rao whose telephone number is (571) 272-
1718. The examiner can normally be reached on Monday- Friday from approximately
7:00 a.m . to 5:30 p. m .

Art Unit: 2814

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0956. The Group facsimile number is (703) 308-7724.



LONG PHAM
PRIMARY EXAMINER